

ZIKA

I. INTRODUCTION

Zika is a virus that can be acquired from mosquitoes or from sex with a person (male or female) who has the virus. While Zika usually only causes mild disease in adults, Zika can be passed from a pregnant woman to her fetus and cause serious birth defects and pregnancy complications including the following:

- microcephaly
- absent or poorly developed brain structures
- defects of the eye
- hearing deficits
- miscarriage
- stillbirth

The full scope of health problems associated with Zika virus infection during pregnancy is not yet known. It is also unknown whether risk of Zika infection differs according to the trimester of pregnancy in which infection occurs, or what the risk is for a woman who is infected with Zika around the time of conception. However, from what we know about other viral infections, infections around the time of conception can potentially lead to infections in the fetus. The incidence of birth defects in pregnancies affected by Zika virus is also unknown, with some data suggesting a risk up to 29% of infected pregnancies.

A. Transmission:

Zika virus is transmitted primarily through the bite of *Aedes aegypti* mosquitoes, although transmission via *Aedes albopictus* mosquitoes is also possible. Local transmission of the Zika virus by *Aedes aegypti* and *Aedes albopictus* mosquitoes has occurred in the following United States (US) territories: Commonwealth of Puerto Rico, the US Virgin Islands, and American Samoa. Anyone traveling to or living in regions in which there is local, mosquito-borne transmission of Zika virus has the potential to be infected.

Zika is also transmitted sexually. A male or female infected with the Zika virus can transmit Zika to their female and male sex partners through vaginal, anal, or oral sex or the sharing of sex toys. At present, there is limited information about how long men and women exposed to Zika are at risk for spreading the virus.

For biologically male clients, it is known that the virus can persist in semen longer than in blood. CDC recommends that men with possible Zika exposure, regardless of symptoms, wait at least 6 months after symptom onset (if symptomatic) or last possible exposure (if asymptomatic) before attempting conception, or, if concerned about sexual transmission, before having sex without use of a condom (male or

female) to protect against infection. Of note, men with asymptomatic Zika virus infection may sexually transmit Zika virus to their partners. When considering risk of sexual transmission from an exposed female partner, it is most relevant to consider whether exposure occurred within the past 8 weeks.

CDC recommends healthcare providers use standard precautions during patient care regardless of suspected or confirmed Zika infection status. Although there is no evidence of Zika transmission through aerosol exposure, minimizing the aerosolization of blood or body fluids as much as possible during patient care or laboratory tasks may help prevent workers from being exposed to other pathogens.

Zika can also be transmitted vertically from a mother to a fetus.

B. Incubation and Symptoms:

The incubation period (time between infection to development of symptoms) of the Zika virus is not known with certainty, but may range from a few days to 2 weeks. Symptoms of Zika are typically mild, with the most common being the following:

- acute onset of fever
- macular or papular rash
- arthralgia (joint pain)
- conjunctivitis (red eyes)

Many people do not have symptoms and do not know they are infected. Symptoms typically last from a few days to about a week. Neurologic and autoimmune complications are infrequent but have been described in outbreaks in Polynesia and, more recently, South America and Puerto Rico.

In pregnant women, fetal abnormalities detected by prenatal imaging or at birth are considered a symptom of Zika virus disease.

C. Prevention of Transmission:

1. Mosquito transmission:

When traveling to areas with local Zika transmission, the following will help reduce the risk of mosquito bites:

- a. Long sleeve shirts, long pants and socks
- b. Make sleep areas safer with use of air conditioning, window and door screens and the use of mosquito nets
- c. Use EPA registered insect repellent with one of the following active ingredients: DEET, picaridin, IR3535, oil of lemon eucalyptus or paramethane-diol or 2-undecanone.
- d. Wear permethrin-treated clothing

2. Sexual transmission:
 - a. Use of condoms for anal or vaginal sex, and/or use of protective barriers for oral sex, and/or avoid sharing of sex toys with partners at risk for Zika.
3. Vertical transmission to fetus:

Prevention of pregnancy through abstinence or use of highly effective contraceptive methods for 8 weeks after onset of symptoms of Zika (if symptomatic) or last possible exposure to Zika (if asymptomatic).

 - a. Prevention of infection during pregnancy via:
 - i. Avoidance of travel when possible to areas with local transmission of Zika during pregnancy
 - ii. If travel to area with local Zika transmission unavoidable, minimize risk via prevention of mosquito bites
 - iii. Prevention of infection via sexual transmission (see above)

II. FAMILY PLANNING SERVICES AND ZIKA PREVENTION

Providers of family planning services, including those in Title X clinics and in primary care sites such as Federally Qualified Health Centers, will play an important role in helping women and men make informed decisions about pregnancy and childbirth in the context of Zika. Most of these clients are not pregnant, so there is an opportunity to prevent the consequences of Zika by educating them about how it is transmitted and the risks that Zika poses to reproductive health, and helping them to consider how those risks may affect their plans for pregnancy and their use of contraception.

All clients, whether or not they have a known risk for Zika, should also receive basic information about strategies to prevent Zika transmission, as individuals not currently at risk can develop new exposures over time.

Helping clients to consider their reproductive options in the context of Zika and other personal and contextual influences should be done in a manner consistent with the CDC and Office of Population Affairs (OPA) recommendations, *Providing Quality Family Planning Services* (2014).

Key recommendations from these guidelines include:

- Engage in client-centered and culturally competent counseling that focuses on clients' individual needs and preferences.
- Use plain language and best practices for risk communication, and utilize the teach-back method and other approaches to ensure understanding.
- Discuss contraceptive effectiveness as one consideration in the choice of a contraceptive method.
- Offer a full-range of methods on a same-day, onsite basis, including long-acting reversible contraceptive methods (IUDs and implant). This includes offering emergency contraception to all clients.

- Educate clients that correct and consistent use of condoms reduces the risk for sexually transmitted infections (STIs), pregnancy, as well as Zika. Clients should be offered both condoms and other methods of contraception.

III. SCREENING, COUNSELING and TESTING FOR ZIKA IN FAMILY PLANNING SETTING

This guideline is focused on the Zika-related health needs of non-pregnant women and men of reproductive age. However, providers should be aware that CDC has also published recommendations for pregnant women (<http://www.cdc.gov/zika/hc-providers/pregnant-woman.html>). Additionally, these guidelines are written for regions, such as Maryland where there is NO LOCAL ZIKA TRANSMISSION. As the Zika epidemic evolves, it is possible that areas where there was no local Zika transmission can become areas with local transmission. Providers should stay up to date on the status of Zika by visiting the CDC Zika updates at [http:// www.cdc.gov/zika/geo/index.html](http://www.cdc.gov/zika/geo/index.html)

A. Step 1: Initial Screen for Possible Exposure to Zika in Past or Future

All non-pregnant clients of reproductive age regardless of gender should be screened for possible past, present, or future exposure to Zika virus and educated about the risks of infection during pregnancy.

This screening can be done by the provider, but can also be by a medical assistant or nurse prior to the encounter with the provider, either at the time of booking of an appointment, at the time the client checks in or when the client is taken into an exam room.

1. Initial Screening Questions for Zika:

- a. Where have you traveled to or lived in the past:
 - i. 8 weeks (biological female)
 - ii. 6 months (biological male)?
- b. Where do you plan to travel to or live in the next year?
- c. Where has any person you are having sex with traveled to or lived in the past 6 months?
- d. Where does anyone you are having sex with plan to travel to or live in the next year?

- B. Step 2: Risk Assessment for Exposure Based on Answer to Initial Screening Questions
Once the initial screening questions have been answered, the provider should conduct a risk assessment based on the client responses. This requires the provider to have up to date information on areas with local mosquito-borne transmission of Zika virus. Updated maps with information on areas with local Zika transmission can be found at: <http://www.cdc.gov/zika/geo/index.html>

1. The following individuals are considered at past or present risk of having/transmitting Zika:

- a. Individuals who have lived in or traveled to an area with local transmission of Zika in the past six months.
 - b. Anyone who has had sex (including vaginal, anal, or oral sex or the sharing of sex toys) with a person who is at risk for spreading Zika within 6 months
 2. Those who meet the above criteria should be screened for symptoms of Zika infection:
 - a. Fever
 - b. Rash
 - c. Joint pain (arthralgias)
 - d. Red eyes (conjunctivitis)
 3. Anyone who plans to travel to or live in an area with local Zika transmission in the next year or whose sexual partner(s) plans to travel to or live in an area with local Zika transmission should be considered at risk for future exposure to Zika.
- C. Step 3: Assessment of Reproductive Goals
- In many cases it will be most helpful to discuss the topic of Zika after assessing clients' feelings and intentions around future pregnancy. This will allow for information about Zika virus to be provided in a manner that is tailored to individuals' specific needs, followed by counseling that is appropriate given their desires and the possibility of future pregnancy.
1. Some women and couples seeking pregnancy may change their minds and decide to delay until more is known about Zika.
 2. Women who decide they want to prevent pregnancy may use contraception more consistently and correctly, or may choose to use more effective, less user-dependent methods, such as contraceptive implants and intrauterine devices.
 3. Women trying to become pregnant, or who are pregnant, may wish to take precautions to reduce the risk of Zika transmission.
- There are various ways to assess reproductive goals (please refer to guideline on reproductive planning), but a couple of examples of simple ways to elicit this information include:
1. "Would you like to become pregnant in the next year?"
 2. "Tell me about your plans for pregnancy in the next year."
- D. Step 4: Individualized Counseling Based on Reproductive Goals and Risk Assessment
- Counseling/education regarding Zika should be tailored to the client's reproductive goals and risk assessment. Healthcare providers should integrate consideration of this exposure into their family planning services:
1. Help clients to consider how information about Zika and their risk may affect their reproductive health goals and behaviors.
 2. Provide contraceptive services to those who wish to prevent or delay pregnancy, considering their Zika risk as one influence on their choice of a contraceptive method.
 3. Provide condoms to men and women who are at risk for sexual transmission of Zika.
 4. Counsel clients who are at risk of Zika infection and may become pregnant about how to reduce the risk of acquiring Zika before and during pregnancy.
 5. Offer testing to women and men who are exposed to Zika virus and develop symptoms.

IV. COUNSELING/EDUCATION

1. For clients wishing to prevent pregnancy:
 2. **Without** potential exposure to Zika (past, current, or in next year)
 - a. Offer basic information about the virus, its transmission, and preventive strategies.
 - b. Offer client centered contraceptive counseling and family planning services including pregnancy testing
 2. **With** potential exposure to Zika
 - a. Offer Zika testing to those who have had symptoms of Zika within 2 weeks of (see section on Zika Testing below)
 - b. Offer pregnancy testing (female clients)
 - c. Offer client centered contraceptive counseling and family planning services including pregnancy testing taking into account method effectiveness as it relates to Zika (prevention of transmission AND prevention of pregnancy)
 - d. Offer education about the epidemiology and risks associated with Zika virus
 - e. Discuss strategies to prevent Zika infection and educate about symptoms of Zika infection
2. For clients wishing to conceive or clients who have not stated a clear intention about pregnancy (either to prevent or attempt pregnancy):
 1. **Without** potential exposure to Zika (past, current, or in next year):
 - a. Provide targeted information regarding risks of Zika to pregnancy
 - b. Offer basic information about the virus, its transmission, symptoms of infection and preventive strategies.
 - c. Offer routine patient-centered preconception counseling (see guideline on preconception care/counseling)
 - d. Offer pregnancy testing to female clients
 - e. Discuss option for temporary pregnancy prevention if status of exposure changes
 2. **With** potential exposure to Zika
 - a. Provide targeted information regarding risks of Zika to pregnancy
 - b. Discuss timing of possible pregnancy in context of exposure as follows:
 - i. If a female partner is exposed to Zika through travel or sexual activity, regardless of symptoms, she should delay attempts at conception and should use condoms to prevent sexual transmission for at least 8 weeks after symptoms start or last possible exposure.
 - ii. If a male partner is exposed to Zika through travel or sexual activity, regardless of symptoms, the couple should delay attempts at conception and should use condoms to prevent sexual transmission for at least 6 months after symptoms start or last possible exposure.
 - iii. Female clients who could become pregnant and who might (or whose partner might) travel to an area with Zika should consider CDC recommendations regarding use of condoms and avoiding conception after possible Zika exposure. If travel is planned, provide information about Zika prevention, including strategies to prevent mosquito bites (see earlier section on prevention of transmission).

- c. Offer Zika testing to those who have had symptoms of Zika within 2 weeks of (see section on Zika Testing below)
- d. Offer pregnancy testing to female clients

CDC recommends that women with possible Zika exposure, regardless of symptoms, wait at least 8 weeks after symptom onset (if symptomatic) or last possible exposure (if asymptomatic) before attempting conception, or, if concerned about sexual transmission, before having sex without use of a condom (male or female) to protect against infection.

V. TESTING FOR ZIKA

For men and non-pregnant women living in an area without local Zika virus transmission, testing is recommended if the individual:
Has a possible exposure to Zika
AND
Has experienced symptoms of Zika virus within 2 weeks of possible exposure.

- A. Any client with symptoms of Zika within 2 weeks of an exposure should be tested for Zika virus.
- B. CDC does not recommend testing of asymptomatic men or women for the purpose of establishing that they are not infected with Zika or at risk of sexually transmitting Zika. This is because a negative test result may be falsely reassuring. Whereas a positive Zika test result indicates the definitive need to delay pregnancy, a negative test result cannot be used to establish the absence of risk.
- C. In an area without local transmission of Zika, the only circumstances under which testing should be considered for an asymptomatic person are the following:
 - 1. Pregnant women who have either traveled to an area with local mosquito-borne transmission of Zika; or
 - 2. Pregnant women who have had sex without a condom with a partner who lives in, or has traveled to, an area with mosquito-borne Zika transmission.
- D. The following testing process should be undertaken:
 - 1. Serum and urine collected from symptomatic patients < 14 days post onset of symptoms should be tested by Zika virus real time reverse transcriptase-polymerase chain reaction (rRT-PCR).
 - a. A positive Zika rRT-PCR result in either specimen is sufficient to diagnose Zika virus infection.
 - b. If Zika virus rRT-PCR results are negative for both specimens, serum should be tested by antibody detection methods.
 - 2. Serum that has been collected from patients presenting 2-12 weeks from onset of symptoms should be tested first by anti-Zika immunoglobulin (IgM) detection methods.

For information on the appropriate type and timing of testing, see the CDC Zika testing guidelines: <https://www.cdc.gov/zika/laboratories/lab-guidance.html>
 or the Maryland Department of Health
<https://phpa.health.maryland.gov/pages/zika.aspx>

REFERENCES

Zika Toolkit for Healthcare Providers: Providing Family Planning Care for Non-Pregnant Women and Men of Reproductive Age in the Context of Zika: U.S. Department of Health and Human Services. Rockville, MD: U.S. Department of Health and Human Services, Office of Population Affairs, 2016. Available at: <https://www.fpntc.org/resources/zika-toolkit-healthcare-providers-providing-family-planning-care-non-pregnant-women-and>

CDC site on Zika: <https://www.cdc.gov/zika/index.html>

Maryland Department of Health (MDH) site on Zika: <https://phpa.health.maryland.gov/pages/zika.aspx>